

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WISCONSIN

UNITED STATES OF AMERICA
and the STATE OF WISCONSIN

Plaintiffs,

v.

P. H. GLATFELTER COMPANY
and
WTM I COMPANY
(f/k/a Wisconsin Tissue Mills Inc.),

Defendants.

CIVIL ACTION NO. 03-C-0949

The Honorable Lynn Adelman

VOLUME 5 OF 6

**APPENDIX OF PUBLIC COMMENTS ON
“CONSENT DECREE FOR REMEDIAL DESIGN AND REMEDIAL ACTION AT
OPERABLE UNIT 1 OF THE LOWER FOX RIVER AND GREEN BAY SITE”**

Respectfully submitted,

For the United States of America

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Date: March 8, 2004

S/ Randall M. Stone

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4.4.2 Specific Requirements

Additional details on specific rules and regulations identified as applicable to the proposed commercial-scale GFT with specific, substantive requirements are provided below. The supporting basis for negative applicability conclusions for specific regulations is also provided.

4.4.2.1 New Source Performance Standards (NSPS)

NSPS Subpart Dc: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

NSPS Subpart Dc is incorporated in NR 440.207. This standard applies to steam generating units with rated heat input capacities less than or equal to 100 MMBtu/hr but greater than or equal to 10 MMBtu/hr. “Steam generating unit” is defined as “a device that combusts any fuel and produces steam or heats water or any other heat transfer medium.”

The proposed natural gas-fired auxiliary heater for the GFT sediment dryer thermal oil system meets the definition of steam generating unit under the NSPS, and according to the energy balance for the 250 glass ton plant, the nominal capacity of the unit would be between 10 and 100 MMBtu/hr. The substantive requirements of the NSPS (e.g., PM and SO₂ emission limits and associated testing and monitoring requirements) apply only to affected facilities that combust coal, oil, or wood or combinations of such fuels with other fuels. As a natural gas only-fired affected facility, only the notification of construction and start-up requirements of 40 CFR 60.48c (a) and fuel combustion recordkeeping requirements of 40 CFR 60.48c (g) would be applicable to the auxiliary heater.

NSPS Subpart CC: Standards of Performance for Glass Manufacturing Plants

NSPS Subpart CC is incorporated in NR 440.46. This standard applies to glass melting furnaces with capacities of 5 tons of glass per day or greater commencing construction or modification after June 15, 1979. “Glass melting furnace” is defined as “a unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to

produce molten glass. The unit includes foundations, superstructure and retaining walls, raw material charger systems, heat exchangers, melter cooling system, exhaust system, refractory brick work, fuel supply and electrical boosting equipment, integral control systems and instrumentation, and appendages for conditioning and distributing molten glass to forming apparatuses. The forming apparatuses, including the float bath used in flat glass manufacturing and flow channels in wool fiberglass and textile fiberglass manufacturing, are not considered part of the glass melting furnace.”

Although the GFT potentially meets the definition of a glass melting furnace, the particulate matter standards are applicable only to three glass manufacturing industry segments: 1) Container glass, 2) Pressed and blown glass, and 3) Wool fiberglass. These industry segments correspond to Standard Industrial Classification Codes (SIC) 3221, 3229, and 3296, respectively. Best current information indicates that the GFT facility will fall under SIC 3295 (Stone, Clay, Glass, and Concrete Products – Abrasive, Asbestos, and Miscellaneous – Minerals and Earths, Ground or Otherwise Treated).

It seems clear that the GFT process was not considered in the development of NSPS Subpart CC and as such there is a solid case that this Subpart would not be applicable. However, the originally proposed rule and preamble were not reviewed. These documents could be obtained and reviewed to provide further supporting basis for the applicability conclusion if necessary.

NSPS Subpart UUU: Standards of Performance for Calciners and Dryers in Mineral Industries

NSPS Subpart UUU is incorporated in NR 440.73. This standard applies to calciners and dryers at mineral processing plants that commenced construction, modification, or reconstruction after April 23, 1986. “Mineral processing plant” is defined as “any facility that processes or produces any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller’s earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.” A “Calciner” is defined as “the equipment used to remove combined

(chemically bound) water and/or gases from mineral material through direct or indirect heating..." and a "Dryer" is defined as "the equipment used to remove uncombined water from mineral material through direct or indirect heating."

Based on the definition of affected facility under Subpart UUU and preliminary information on the GFT product profile, it was concluded that the standard would not be applicable the proposed GFT facility. None of the listed products in the definition of mineral processing plant are proposed for the GFT facility. However, this finding is preliminary and may not be conclusive.

If deemed applicable, the requirements under NSPS Subpart UUU include:

1. PM: $\leq 0.092 \text{ g/dscm}$ (0.040 gr/dscf) for calciners and dryers installed in series
2. Opacity: $\leq 10\%$, unless emissions are discharged from an affected facility using a wet scrubber (sediment dryer and melter will be wet scrubber controlled)
3. Initial performance test
4. Scrubber parameter monitoring: Continuous monitoring and recording of gas stream pressure loss and scrubbing liquid flow rate

NSPS Subpart CCCC: Standards of Performance for Commercial and Industrial Solid Waste Incineration (CISWI) Units

NSPS Subpart CCCC is a relatively new standard that was promulgated pursuant to Section 129 of the CAA (Solid Waste Combustion). The standard applies to new, nonexempt CISWI units and contains emissions limits for Cd, CO, dioxins/furans, HCl, Pb, Hg, Opacity, NO_x, PM, and SO₂.

The proposed GFT does not meet the definition of CISWI in §60.2265 because the unit design incorporates energy recovery. "Commercial and industrial solid waste incineration (CISWI) unit" is defined as: "any combustion device that combusts commercial and industrial waste, as defined in this subpart," and "Commercial and industrial waste" is defined as: "solid waste combusted in an enclosed device using controlled flame combustion without energy recovery that is a distinct operating unit of any commercial or industrial facility (including field-erected,

modular, and custom built incineration units operating with starved or excess air), or solid waste combusted in an air curtain incinerator without energy recovery that is a distinct operating unit of any commercial or industrial facility. “Energy recovery” is defined as “the process of recovering thermal energy from combustion for useful purposes such as steam generation or process heating.”

The proposed GFT facility design incorporates energy recovery for process heat. Heat from the GFT melter will be recovered and used as process heat for the sediment dryer. As such, based on the definitions and the applicability criteria contained in Subpart CCCC, the standard would not be applicable to the proposed facility.

4.4.2.2 National Emission Standards for Hazardous Air Pollutants (NESHAP)

NESHAP or MACT standards promulgated pursuant to CAA Section 112 are codified at 40 CFR Parts 61 and 63. In general, these standards apply to new or reconstructed affected facilities at major sources of HAP. Part 61 pollutant specific standards and certain area source standards under part 63 also apply to non-major sources. A major source of HAP is defined as: “any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants...”

The proposed commercial-scale GFT facility PTE will be well below the major source threshold for HAPs (see Section 3.0). As such, the majority of NESHAPs would not apply to the proposed facility as a minor source of HAP. Table 4-2 presents a review of all potentially applicable NESHAPs, including area source standards. As documented, no NESHAPs are expected to apply to the proposed GFT facility.

4.4.2.3 Construction and Operation Permits

NR 405 - Prevention of Significant Deterioration (PSD)

The Wisconsin SIP approved PSD regulations are codified in NR 405. The NR 405 regulations are substantially consistent with the federal PSD requirements found at 40 CFR 51.166. Under the PSD program, major new sources of regulated air pollutants and major modifications at existing major sources located in areas designated as attainment or unclassified are subject to pre-construction permitting requirements, including control technology review [application of Best Available Control Technology (BACT)], air quality impact analysis, additional analyses, and public participation.

The proposed commercial-scale GFT will be located in an area designated as attainment, unclassifiable, or better than national standards for all criteria pollutants. As a non-listed source category, the PSD major source threshold for the GFT facility is 250 tons per year. In accordance with NR 405.07(4)(a), fugitive emissions must only be accounted in determining major stationary source or modification status for listed source categories and source categories regulated under sections 111 or 112 of the CAA (NSPS or NESHAP standards, respectively) that were in effect on or prior to August 7, 1980. The proposed GFT facility is not a listed source category and based on the analyses and conclusions herein, the facility would not be regulated by any NSPS or NESHAP standards predating August 7, 1980. Accordingly, potential to emit for the purpose of major source status will be determined based on point source emissions only.

Based on current information provided by Minergy, the uncontrolled PTE of the commercial-scale GFT facility would be below the applicable PSD major source threshold of 250 tons per year. NO_x emissions are limiting, with expected potential emissions of approximately 110 tons per year (not including the auxiliary dryer thermal oil heater). As such, the proposed commercial-scale GFT facility would not constitute a new major source for the purpose of PSD, and PSD pre-construction permitting requirements would not be applicable to the source.

NR 406 - Construction Permits

NR 406 requires that no person commence construction, reconstruction, replacement, relocation, or modification of a stationary source without obtaining a construction permit unless the source or activity is specifically exempt. The proposed GFT facility does not meet the direct source construction permit exemption criteria contained in NR 406.04, and a construction permit would be required prior to commencing construction on the facility.

In accordance with NR 406.03, an application for a construction permit must be submitted on forms available from the department. For non-major source construction [i.e., sources not meeting the major source definition in NR 405.02(22)] such as the proposed GFT facility, the department shall make a determination under s. 285.61(8), Stats. (Construction Permit Application and Review) within 145 business days of receipt of a complete application for construction permit. The construction approval, once granted, is valid for a period of 18 months, and may only be extended for one additional 18-month period upon written request. Per s. 285.60, Stats., a construction permit may authorize the initial operation of a source for a period specified in the permit to allow testing and monitoring, after which an operation permit is required (see below).

According to s. 285.61, Stats., the department follows the procedures below for minor source construction permit application review, analysis, preliminary determination, and public notice:

1. Review of plans, specifications, and other permit application information: within 20 days of receipt of application.
2. Analysis regarding affect of construction on ambient air quality and preliminary determination on the approvability of proposed construction: within 30 days.
3. Distribution and availability of analysis, preliminary determination, and materials. All materials are made available for public inspection.
4. Public notice: Notice of proposed construction, the department's analysis and preliminary determination distributed to appropriate federal, local, state agencies, regional and county planning agencies, public libraries in the area, and any person requesting a notice.

5. Public announcement: Announcement of proposed construction, administrative procedures, and comment procedures circulated to local and regional governments, local and regional new media, and persons/groups demonstrating interest.
6. Newspaper notice: Class 1 notice announcing the opportunity for written public comment and to request a public hearing.
7. Public comment period: 30-day period beginning when department gives initial notice.
8. Public hearing: Department may hold a public hearing if requested by a person, affected state, or U.S. EPA within 30 days after the department gives notice. The department shall hold the public hearing within 60 days after the deadline for requesting a hearing if it deems that there is significant public interest.
9. Department determination and permit issuance: The department shall make a determination within 145 business days of receipt of a complete application for construction permit.

General criteria for permit approval applicable to both construction and operation permits are identified under s. 285.63 Stats., and include:

1. The source will meet all applicable emission limitations and other requirements promulgated under NR Chapter 400 and any applicable NSPS and NESHAP.
2. The source will not violate or exacerbate violation of an air quality standard or increment.
3. The source will not preclude construction or operation of another source if the department received such plans and specifications prior to its analysis of the subject source.

NR 407 - Operation Permits

NR 407 codifies the operation permit requirements of s. 285.62, Stats. An operation permit would be required for the proposed GFT facility. The procedures for review of plans and specifications, public notice, comment period, and public hearing are substantially consistent with those applicable to construction permits. Per s. 285.62(11), Stats. and NR 407.04(1), the

operation permit application shall be submitted concurrent with the application for construction permit.

Based on the potential to emit of the commercial-scale GFT estimated by Minergy, and the regulatory applicability conclusions presented herein, the proposed facility qualifies as a major source for the purpose 40 CFR Part 70 (Title V operating permit program). NO_x emissions are limiting, with uncontrolled potential emissions estimated above the 100 ton per year Part 70 major source threshold. Fugitive emissions, which have not yet been quantified, must be accounted for in determining potential to emit only to the extent that the pollutant is regulated under an applicable NSPS or NESHAP standard. Emission controls may be considered part of the design of the source for determining potential to emit if they are made enforceable.

Minergy could elect to install a NO_x control system on the GFT limiting potential emissions to below 100 tons per year. To avoid Title V applicability, such a limitation would have to be made enforceable by a synthetic minor operating permit containing specific limitations, control equipment, and monitoring and recordkeeping requirements.

Table 4-3 presents a summary of operation permit application requirements and procedures; permit processing steps, applicable notifications, and approval/issuance timeframes for Part 70 and minor/synthetic minor operation permits.

Table 4-3. Summary of Operation Permit Procedures

Application / Permit Processing Requirement	Part 70 Source	Minor or Synthetic Minor Source
Application Filing Date	With application for construction permit	Same
Application Materials	1. Forms, signed by responsible official 2. Identifying information 3. Description of process/products 4. Emission related information 5. Air pollution control requirements 6. Other specific information required for applicability determination or enforcement 7. Proposed exempted activities 8. Alternate operating scenario information 9. Compliance plan 10. Compliance certification 11. Certification of truth, accuracy, and completeness 12. Identification of confidential information	Same for new sources requiring a construction permit
Completeness Determination	Deemed complete within 20 days of submittal unless department determines in writing that application is incomplete.	Same
Criteria for Permit Approval (applies to construction and operation permit)	4. Source will meet requirements 5. Source will not violate or exacerbate violation of an air quality standard or increment 6. Source will not preclude construction or operation of another source if the department received plans prior to its analysis	Same
Action on Applications	Department conducts review, notification and publication, public comment and public hearing processes under s. 285.62(3) to (5) Stats. for the operation permit simultaneously with the similar processes under s. 285.61(3) to (7) Stats. for the construction permit. 45-day EPA Review and opportunity to comment / object to department permit Affected state review (states within 50 miles of source and any contiguous state whose air quality may be affected)	Same Not applicable Not applicable
	Issue or deny the operation permit within 180 days after the applicant submits the results of all equipment testing and emission monitoring required under the construction permit.	Same

4.4.2.4 Other NR 400 Series Requirements

NR 415 - Control of Particulate Emissions

NR 415 contains regulations for the control of particulate matter from general and specific source categories, including the following that would be applicable to the GFT facility:

- General limitations;
- Fugitive dust emissions;
- Particulate matter emission limits for processes;
- Particulate matter emission limits for fuel burning installations; and
- Particulate matter emission limits for incinerators.

The general limitations of NR 415.03 require that no person cause, allow or permit particulate matter to be emitted into the ambient air which substantially contributes to exceeding an air standard or creates air pollution. Based on the potential PM emissions from the commercial-scale GFT facility estimated by Minergy and the proposed fugitive emissions control measures, compliance with this general limitations should be readily demonstrable.

Fugitive Emissions –

NR 415.04 requires that no person cause, allow or permit any materials to be handled, transported or stored without taking precautions to prevent particulate matter from becoming airborne. And, not person shall allow a structure, parking lot, or road to be constructed or used without taking such precautions. Precautions to be used include, but are not limited to:

1. Application of asphalt, water, suitable chemicals or plastic covering on dirt roads and stockpiles;
2. Installation and use of hoods, fans, and air cleaning devices to enclose and vent dusty areas;

3. Covering or securing of materials likely to become airborne while being moved on roads; and
4. Paving or maintenance of roadways.

Additional fugitive dust control requirements apply to sources located in specific geographic areas identified in NR 415.035. Although the proposed commercial-scale GFT facility would not be located in any identified "fugitive dust control area," Minergy could propose RACT level fugitive emissions control voluntarily, potentially streamlining air permitting. For reference, the fugitive dust control RACT guidelines contained in NR 415.04(2) include the following:

1. Storage piles with silt content of 5% - 20%: Treated with water, surfactants, stabilizers or chemicals; draped; or enclosed on a minimum of 3 sides. Access areas watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic;
2. Storage piles of material with silt content of 20% or greater: Completely enclosed or draped except any part being worked, loaded or unloaded. Access areas watered, cleaned or treated with stabilizers as needed to prevent fugitive dust from vehicle traffic;
3. Materials handling operations and processes:
 - a. Control materials handling operations to less than 20% opacity when wind speeds are less than 25 mph except for three minutes in any hour when opacity may equal 50%;
 - b. Fugitive sources and with control devices: controlled discharge $PM \leq 0.20$ lb/1000 lb exhaust gas;
4. Roadways with 10 or more motor vehicles per hour:
 - a. Paved with asphalt, concrete or other material approved by the department or use other methods of dust control the department approves as representing RACT;
 - b. For paved roads, keep free of material likely to become airborne through a program of periodic cleaning.

Particulate Matter Emission Limits for Processes –

In accordance with NR 415.05, sources involving a process on which construction commenced

after April 1, 1972 shall not emit particulate matter in excess of that calculated using the following equations:

$E = 3.59 P^{0.62}$ for process weight rates up to 60,000 pounds per hour

$E = 17.31 P^{0.16}$ for process weight rates of 60,000 pounds per hour or more

(E is the allowable emission rate in pounds per hour and P is the process weight rate in tons per hour)

These limitations, although applicable, do not represent an actual constraint on the GFT facility equipment design or operation. Estimated commercial-scale potential emissions are well below the allowable emission rates derived from the applicable equations.

Particulate Matter Emissions from Fuel Burning Equipment –

NR 415.06 contains particulate matter emission limits for fuel burning greater than 1 MMBtu/hr heat input capacity. The limit of 0.15 lb PM/MMBtu contained in NR 415.06(2)(a) would be applicable to the sediment dryer auxiliary heater.

Particulate Matter Emissions from Incinerators –

“Incinerator” is defined in NR 400.02(83) as “a combustion apparatus designed for high temperature operation in which solid, semisolid, liquid, or gaseous combustible wastes are ignited and burned to produce solid and gaseous residues containing little or no combustible material.” Based on this definition, the proposed GFT appears to qualify as an incinerator and would thus be subject to the particulate matter standards of NR 415.07. The applicable standard, contained in NR 415.07(2) for units rated at > 4,000 pounds of waste per hour commencing construction after April 1, 1972 is 0.20 pounds of particulate matter per 1,000 pounds of exhaust.

NR 431 - Control of Visible Emissions

NR 431 requires that sources constructed after February 1, 1975 not cause or allow emissions to exceed 20% opacity with the following two exceptions:

1. When combustion equipment is being cleaned or restarted, emissions may exceed 20% opacity but may not exceed 80% opacity for 5 minutes in any one hour;
2. Emissions may exceed 20% opacity for stated periods of time, as permitted by the department, for operating test, use of emergency equipment, or other good cause;

The 20% opacity limitation would be applicable to emission points at the GFT facility.

NR 445 - Control of Hazardous Pollutants

NR 445 is applicable to all sources of hazardous air contaminants, except where pollutant/source category specific standards under NR 446 – 449 or section 112 of the CAA (NESHAP) are applicable. In such cases, NR 445 does not apply for the specific pollutants regulated by the subsuming standard. For the GFT facility, NR 446 - Control of Mercury Emissions will be applicable (see below).

Under NR 445, a new source such as the GFT facility may not emit hazardous air contaminants listed in Tables 1 – 4 of NR 446.04 in excess of specified health based quantities and durations or above specific thresholds without meeting Best Available Control Technology (BACT) or Lowest Achievable Emission Rate (LAER) level emission control. Compliance with concentration-based limits may be demonstrated by showing that the concentration of a substance in the stack is less than the allowable ambient concentration or by dispersion modeling. Table 4-4 presents the NR 445.04 emission limits for toxic air contaminants identified as Contaminants of Concern (COC) in the Fox River site sediments.

Table 4-4. NR 445 Limits for Contaminants of Concern

Contaminant	NR 445.04 Table No.	Limit
PCB's	3, Group B	If emissions exceed 0.10 lb/yr, meet BACT level control
2,3,7,8-TCDD	3, Group B	If emissions exceed 0.0001 lb/yr, meet BACT level control
Deildrin	2	24-hr: Off property ambient concentration ≤ 2.4 % of TLV TWA 1-hr: Off property ambient concentration ≤ 10 % of TLV ceiling
Arsenic	3, Group A	If emissions exceed 25 lb/yr, meet LAER level control
Lead	N/A	
Mercury, elemental		Subject to NR 446, see below
Mercury alkyl compounds	1	
Mercury, all forms except alkyl, vapor	1	24-hr: Off property ambient concentration ≤ 2.4 % of TLV TWA 1-hr: Off property ambient concentration ≤ 10 % of TLV ceiling
Mercury aryl & inorganic compounds	1	

Based on pilot scale GFT test results and scale-up estimate, compliance with NR 445 requirements should be readily demonstrable for the commercial-scale facility for the identified COCs. However, DNR may require source testing to verify/quantify emissions of these and/or other NR 445 regulated air contaminants.

NR 446 - Control of Mercury Emissions

The general mercury emissions limitation under NR 446 (ambient concentration of 1 $\mu\text{g}/\text{m}^3$, 30-day average) would be applicable to the GFT facility. Based on pilot scale GFT test results and preliminary dispersion modeling using a 95 foot stack height and 3 foot inside diameter, the ambient concentration for the commercial-scale plant was estimated at 0.0001 $\mu\text{g}/\text{m}^3$, well below the NR 446 allowable concentration.

4.5 Solid Waste

This section addresses Wisconsin solid waste regulations covering facility construction and operation. State solid waste regulations that apply are found at NR 500, 502, and 520. Hazardous waste requirements are discussed in Section 4.6. Details of solid waste regulations that would apply to the proposed GFT facility are presented in Table 4-5.

As was previously discussed in Section 4.3, the GFT facility would be regulated under s. 289.53 Stats. (Commercial PCB Waste Treatment and Storage Facilities). No implementing regulation was identified for this statute, which specifies that the facility comply with other solid waste statutes, namely:

- Submitting a feasibility report under s. 289.23 (1) to determine whether the site has potential for use in establishing a PCB waste storage or treatment facility.
- Complying with requirements for the preparation and contents of a feasibility report under s. 289.24 (1) including any special requirements for PCB waste storage or treatment facilities.
- Following the notice, hearing, procedure and other requirements under ss. 289.23 to 289.29 including any environmental impact requirements.
- Complying with the requirements under s. 289.30 as if the facility were a solid waste disposal facility including all of the following:
 - Submitting a plan of operation which complies with requirements for preparation and contents specified under s. 289.30 (4) including any special requirements for PCB waste storage or treatment facilities except the department may waive any requirement for proof of financial responsibility for long-term care.
 - Constructing the facility in accordance with an approved plan of operation as required under s. 289.30 (8).
 - Operating the facility in accordance with the approved plan of operation subject to the sanctions under s. 289.30 (9).
- Complying with financial responsibility requirements under s. 289.41; and
- Obtaining an operating license under s. 289.31.

These statutes are largely implemented in the NR 500 series regulations discussed in more detail below. DNR solid waste staff confirmed during a November 6, 2002 meeting that specific provisions of NR 502.04 (General Requirements) and 502.08 (Solid Waste Processing Facilities) would apply to the proposed GFT facility. Additionally, the solid waste general requirements of NR 500 would be applicable as well as the financial responsibility requirements of NR 520.

Table 4-5. Summary of Solid Waste Requirements

Regulatory Citation	Title	Summary of Requirements	Applicable? (Y/N)	Comment
NR 500	General Solid Waste Management Requirements	<p>500.04 – Requires an initial site inspection by DNR staff</p> <p>500.05 – Contains initial submittal requirements</p> <p>500.06 – Contains the requirements for a license application</p> <p>500.065 – Specifies that DNR must make a determination on an initial application for a license within 65 business days of receipt, or refund the license application fee</p> <p>500.07 – Specifies that DNR review and approve, deny or deem incomplete requests for plan approvals or exemptions within 65 business days of receiving the complete request</p> <p>500.09 – Allows DNR to require a construction inspection, if they deem it necessary</p>	Y	
NR 502	Solid Waste Storage, Transportation, Transfer, Incineration, Air Curtain Destruitors, Processing, Wood Burning, Composting and Municipal Solid Waste Combustors (requirements are listed below)		Y	
NR 502.04	General Requirements	<p>502.04 (1) – Lists 6 performance standards the chosen site must meet for processing. The facility must not be constructed within an area where there is reasonable probability that the facility will cause any of the following:</p> <ol style="list-style-type: none"> 1. A detrimental effect on any surface water. 2. A significant adverse impact on wetlands as provided in ch. NR 103. 3. A detrimental effect on groundwater quality or will cause or exacerbate an attainment or exceedance of any preventative action limit or enforcement standard at a point of standards application as defined in ch. NR 140. 4. A significant adverse impact on critical habitat areas. 5. The migration and concentration of explosive gases in any facility structures, excluding any leachate collection system or 	Y	

OU1 COM 222

Regulatory Citation	Title	Summary of Requirements	Applicable? (Y/N)	Comment
		<p>gas control or recovery system components or in the soils or air at or beyond the facility property boundary in excess of 25% of the lower explosive limit for such gases at any time.</p> <p>6. The emission of any hazardous air contaminant exceeding the limitations for those substances contained in s. NR 445.04 or 445.05.</p> <p>502.04 (2) – Requires owner/operator to submit a written request for an initial site inspection:</p> <ul style="list-style-type: none"> • DNR staff must conduct inspection within 22 business days of receiving a complete request, although follow-up inspections may be required. • Within 22 business days of completing the inspection(s), DNR will issue an initial determination of the suitability of the site and may request additional studies or information. <p>This section also specifies what items must be included in the written request.</p> <p>502.04(3) – Contains specific closure requirements:</p> <ul style="list-style-type: none"> • Within 5 calendar days after ceasing to accept waste at the facility, remove all platable waste and containerize, properly utilize or dispose of all other waste. • Within 60 days after ceasing to accept waste at the facility, remove all waste. • At least 60 days prior to ceasing to accept waste at the facility for an extended period (or as soon as practical if due to unplanned or unforeseeable circumstances), notify DNR in writing and prominently post a sign at the facility notifying users of date waste acceptance will stop. 		

OU1 COM 223

Regulatory Citation	Title	Summary of Requirements	Applicable? (Y/N)	Comment
		<ul style="list-style-type: none"> Within 60 days of ceasing to accept waste, close facility in accordance with approved plan of operation. <p>502.04(4) - DNR may require an Environmental Impact Report or Environmental Impact Statement</p> <p>502.04(5) - DNR may require environmental monitoring including monitoring after facility closure</p> <p>502.04(6) - DNR may require closure cost estimates and/or proof of financial responsibility for the cost of closure</p>		Based on notes from a November 6, 2002 meeting with DNR solid waste staff, some of the requirements for solid waste storage facilities may be included in the GFT facility license.
NR 502.05	Storage Facilities	<p>502.05 (1)(a)1 – Comply with NR 502.04</p> <p>502.05 (1)(a)2 – Obtain approval of a plan of operation and an operating license from DNR</p> <p>502.05 (1)(a)3 – Comply with noncontainerized storage requirements in sub. (6)</p> <p>502.05 (1)(b) – Comply with locational criteria in sub. (4)</p> <p>502.05 (4) – Specifies locational criteria. New solid waste storage facility may not be located in an area which is:</p> <ol style="list-style-type: none"> Within a floodplain. Within 250 feet of any private water supply well, or within 1,200 feet of any public water supply well. Within 250 feet of any navigable lake, pond or flowage. Within 250 feet of any navigable river or stream. Within 250 feet of land owned by a person other than the 	Uncertain	Based on notes from a November 6, 2002 meeting with DNR solid waste staff, some of the requirements for solid waste storage facilities may be included in the GFT facility license.

OU1 COM 224

Regulatory Citation	Title	Summary of Requirements	Applicable? (Y/N)	Comment
		<p>owner or operator of the facility, unless the facility is screened by natural objects, plantings, fences or other appropriate means so that it is not visible from the property boundary.</p> <p>6. Within 1,000 feet of the nearest edge of the right-of-way of any state trunk highway, interstate or federal aid primary highway or the boundary of any public park, unless the facility is screened by natural objects, plantings, fences or other appropriate means so that it is not visible from the highway or park.</p> <p>7. Within 10,000 feet of any airport runway used or planned to be used by turbojet aircraft or within 5,000 feet of any airport runway used only by piston type aircraft or within other areas where a substantial bird hazard to aircraft would be created. This criterion is applicable only when the facility will be used for handling putrescible waste.</p>		<p>502.05 (6) – Specifies minimum operational criteria. Must be operated in accordance with the approved plan and the following:</p> <ul style="list-style-type: none">a. All weather access shall be provided and maintained.b. Effective measures shall be taken to control flies, rodents and other vectors.c. Periodic maintenance or clean-up of the facility shall be conducted to keep it aesthetically pleasing and nuisance-free.d. Gates, fencing and an attendant shall be provided as specified by the department.e. Solid waste shall be disposed of at a licensed facility approved by the department.f. Solid waste may not be burned.

OU1 COM 225

Regulatory Citation	Title	Summary of Requirements	Applicable? (Y/N)	Comment
		<p>g. The facility shall be operated and maintained in a sanitary, nuisance-free manner so as to protect the environment and the public health.</p> <p>h. Adequate drainage shall be maintained on and around the facility.</p> <p>502.05 (8) – Requires the owner/operator to prepare a plan of operation, to obtain a plan of operation approval from DNR, and specifies minimum information that the plan of operation shall contain.</p> <p>502.05 (9) – Requires the owner/operator to include in the plan of operation a set of engineering plans and maps, and specifies what these documents must contain.</p> <p>502.05 (10) – DNR may require the submittal of a construction documentation report.</p>		
NR 502.08	Solid Waste Processing Facilities	<p>502.08 (1)(a) – Comply with NR 502.04, obtain approval of a plan of operation, and obtain an operating license from DNR</p> <p>502.08 (1)(b) – Comply with locational criteria in sub. (3)</p> <p>502.08 (3)(a) – Specifies locational criteria. New solid waste processing facility may <u>not</u> be located in an area which is within a floodplain.</p> <p>502.08 (3)(b) – [Assuming that storage will be within a building] Possibly other locational criteria <u>may</u> be specified by DNR.</p> <p>502.08 (4) – Requires the owner/operator to prepare a plan of operation, to obtain a plan of operation approval from DNR, and specifies minimum information that the plan of operation shall contain.</p> <p>502.08 (5) – Requires the Plan of Operation contain a set of engineering plans and maps, and specifies what this package should contain.</p>	Y	

Regulatory Citation	Title	Summary of Requirements	Applicable? (Y/N)	Comment
		<p>502.08 (6) – Specifies minimum operational criteria. Must be operated in accordance with the approved plan.</p> <p>502.08 (7) – DNR may require that a registered professional engineer document facility construction and render an opinion whether the facility has been constructed in substantial conformance with the approved plan.</p> <p>502.08 (8) – DNR will specify monitoring to be performed based on a review of the potential for environmental pollution.</p>		
NR 520	Solid Waste Management Fees and Financial Responsibility Requirements	<p>Specifies schedules of initial and annual fees for licenses, initial fees for plan approvals and other documents, and solid waste disposal fees.</p> <p>This chapter also specifies the requirements for completing closure cost estimates and providing proof of financial responsibility, including the Minimum Long Term Care Proof Period (in years).</p>	Y	For storage facilities and incinerators, Closure Proof and the Minimum Long Term Care Proof Period is specified only if required in a Department Plan Approval.

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4.5.1 General Requirements

The site ultimately chosen for the facility must meet the performance standards listed in NR 502.04(1). Once a site is chosen, an initial site inspection must be requested in writing, and will be conducted by DNR staff within 22 business days of receiving a complete request, although follow-up inspections may be required. Within 22 business days of completing the inspection(s), DNR would issue an initial determination of the suitability of the site and may request additional studies or information. DNR may require an Environmental Impact Report or Environmental Impact Statement (NR 502.04(4)), may require environmental monitoring including monitoring after facility closure (NR 502.04(5)), and may require closure cost estimates and proof of financial responsibility for the cost of closure (NR 502.04(6); NR 520). As shown in Table 4-5, there are also specific closure requirements listed in NR 502.04(3).

4.5.2 Specific Requirements

In addition to the general requirements in NR 502.04, specific requirements in NR 502.08 (solid waste processing facilities) would apply to the GFT facility. The chosen site must meet the locational criteria in NR 502.08(3), and the owner/operator must obtain from DNR an approval of the plan of operation [NR 502.08(4)], submit engineering plans [NR 502.08(5)], and comply with minimum operational requirements [NR 502.08(6)]. Construction documentation [NR 502.08(7)] may be required by DNR, and specific monitoring requirements [NR 502.08(8)] would be imposed.

4.5.3 Fees and Financial Responsibility

Solid waste license and review fees, environmental fees, and financial responsibility requirements are covered in NR 520 – Solid Waste Management Fees and Financial Responsibility Requirements. Table 4-5 contains the general NR 520 requirements for the proposed facility. Decisions yet to be made by DNR and EPA concerning coordinated approval will determine which financial responsibility regulations (those in NR 520 or those in 40 CFR Part 761, or both) would apply to the facility.

4.6 Hazardous Waste

Wisconsin hazardous waste regulations are found at NR 600 - 690. Generally, any facility engaged in treatment, storage or disposal (TSD) (including incineration) of hazardous waste must apply for a permit under these rules. In determining whether the proposed facility would require a TSD permit, it is first necessary to determine whether or not DNR has characterized the dewatered sediment as hazardous waste.

The Draft RI/FS and Proposed Plan for the Fox River site were reviewed for DNR's current characterization of Fox River sediments. Section 5.0 of the Draft RI Report includes extensive characterization data collected on samples of sediment, including several Toxicity Characteristic Leaching Procedure (TCLP) test results. The test results indicate that the sediment does not exhibit the characteristic of toxicity. Additionally, Ed Lynch, the DNR Project Manager for the Fox River site, has indicated that DNR does not currently consider the dredged sediment to be hazardous because the sediment contamination did not result from discharge of any listed hazardous wastes to the Fox River, and the sediment does not exhibit the characteristic of toxicity. This investigation indicates that a TSD facility permit under NR 600-690 would not be required.

The proposed GFT facility may generate small amounts of hazardous waste incidental to operations (i.e., from the maintenance activities, painting, etc.), as well as used oil and universal waste (waste batteries, pesticides, thermostats, etc.). If so, the facility would need to comply with provisions of the Wisconsin and federal hazardous waste regulations applicable to generators of hazardous waste, used oil and universal wastes. However, except for the need to apply for and obtain an EPA generator ID number, there are no permitting requirements for hazardous waste generators.

4.7 Wastewater

The proposed GFT facility design includes a wastewater discharge of approximately 100 gallons per minute (gpm) or < 0.2 million gallons per day (mgd). The wastewater stream would be comprised of dryer condensate, scrubber blowdown, cooling tower blowdown, and potentially sediment leachate (there may also be sanitary waste from bathrooms and sinks). Minergy proposes to discharge the GFT facility process wastewater either to a nearby sediment dredging/dewatering facility with a permitted Wisconsin Pollutant Discharge Elimination System (WPDES) wastewater treatment plant, or to a Publicly Owner Treatment Works (POTW) following on-site pre-treatment. For the purpose of this study, it was assumed that no direct surface or groundwater discharge would be sought for the GFT facility and that, except for storm water, a WPDES permit would not be required pursuant to NR Chapter 200.

Pre-treatment standards for new sources (PSNS) are applicable to sources discharging wastewater to POTW's and are contained in federal Effluent Standards (40 CFR 400 – 499) and NR Chapter 200. Two pretreatment standards would potentially be applicable to the GFT facility wastewater: General Pretreatment Standards (40 CFR 403 and NR 211) and Pretreatment Standards for the Centralized Waste Treatment (CWT) Point Source Category (40 CFR 437). General pretreatment standards include limitations on water quality and characteristics such as pH, flash point, solid and viscous pollutants, BOD, heat, oil content, and gaseous pollutants. PSNS for the CWT source category include concentration limitations for metals, oils, and organics. Table 4-6 presents a summary of PSNS requirements contained in 40 CFR 437.

Table 4-6. Summary of CWT Pretreatment Standards

Pollutant/Parameter	PSNS Limit (Max. daily mg/l)	PSNS Limit (Max. monthly mg/l)
BOD ₅	163	53.0
O&G	127	38.0
PH	6 - 9	
TSS	29.6	11.3
Antimony	0.111	0.0312
Arsenic	0.0933	0.0199
Cadmium	0.0172	0.0102
Chromium	0.167	0.0522
Cobalt	0.182	0.0733
Copper	0.659	0.216
Lead	0.350	0.160
Mercury	0.000641	0.000246
Molybdenum	1.01	0.965
Nickel	0.794	0.309
Selenium	0.176	0.0698
Silver	0.0318	0.0122
Tin	0.0955	0.0367
Titanium	0.0159	0.00612
Vanadium	0.0628	0.0518
Zinc	0.657	0.252
Acetone	30.2	7.97
Acetophenone	0.114	0.0562
Aniline	0.0333	0.0164
Bis (2-ethylhexyl) phthalate	0.215	0.101
2-Buanone	4.81	1.85
Butylbenzyl phthalate	0.188	0.0887
Carbazole	0.598	0.276
o-Cresol	1.92	0.561
p-Cresol	0.698	0.205
n-Decane	0.948	0.437
2,3-Dichloroanaline	0.0731	0.0361
Fluoranthene	0.0537	0.0268

Pollutant/Parameter	PSNS Limit (Max. daily mg/l)	PSNS Limit (Max. monthly mg/l)
n-Octadecane	0.589	0.302
Phenol	3.65	1.08
Pyridine	0.370	0.182
2,4,6-Trichlorophenol	0.155	0.106

Permitting requirements for wastewater discharges to a POTW would include a sewer use ordinance and a pretreatment permit, both issued by the subject municipality or control authority. Per NR 108, DNR must review and approve the pretreatment system plans and specifications. Also, operator training and certification requirements are applicable to industrial pretreatment plants (NR 114).

4.8 Storm Water

If the facility is considered off-site, storm water permitting will be required for both construction activities and for the fully operational facility. If the facility is located on-site, both construction and operation will have ARARs for storm water discharges. This section discusses storm water permitting requirements for both facility construction and facility operation.

4.8.1 Construction Activities

Owners or operators of most construction projects where five or more acres of land will be disturbed must obtain a WPDES Construction Site Erosion Control and Storm Water Discharge Permit. Construction sites that obtain an equivalent permit or approval from the Wisconsin Department of Commerce or Department of Transportation do not need a Construction Site Erosion Control Permit from the DNR. For all other construction sites where five or more acres of land will be disturbed, owners or operators are required to obtain a WPDES Construction Site Erosion Control and Storm Water Discharge Permit. For construction of commercial facilities such as the GFT facility, the Department of Commerce issues the storm water construction permit. It should be noted that rule changes expected in 2003 will reduce the size of construction

sites requiring this type of permit from **five or more** acres to **one or more** acres. This permit should be applied for at least 14 days prior to starting construction, and the application package must include Storm Water Pollution Prevention Plans (SWPPPs) for both construction activities and the operating facility.

Applicable requirements include:

- Completion/submittal of forms for approval by Dept. of Commerce; and
- Complete and submit SWPPPs. The SWPPPs would include Best Management Practices (BMPs) designed to minimize the entrainment of silt.

4.8.2 GFT Facility

Chapter NR 216 of the Wis. Administrative Code contains a list of industrial facilities that must obtain a storm water discharge permit. The determination of whether or not an industrial facility must obtain a storm water discharge permit is based both on the facility's Standard Industrial Classification (SIC) code and whether or not the facility has the potential to contaminate storm water. The Department confers coverage for general industrial storm water discharges based on a three-tiered system. This system groups facilities by industry and how likely they are to contaminate storm water. These general permits (called Tier 1, Tier 2 and Tier 3 permits) differ in chemical monitoring requirements, inspection frequency, plan development requirements and the annual permit fee.

The SIC code of the proposed GFT facility has not yet been determined. As such, the facility could be subject to the requirements of either the Tier 1 general permit or the Tier 2 general permit, depending on the SIC code that is assigned. Alternatively, DNR staff could request the facility owner/operator to apply for a specific storm water permit.

The general storm water permit for the facility must be applied for at least 6 months prior to facility operation, on permit application forms supplied by the Department. This would involve

completing a Notice of Intent (NOI) to be covered by the applicable general permit. Applicable requirements of a Tier 2 general permit would include:

- Identify and eliminate non-permitted outfalls
- Follow good housekeeping practices
- Complete annual facility site compliance inspections
- Complete quarterly visual monitoring
- Develop a Storm Water Pollution Prevention Plan (SWPPP)
- Implement source-area BMPs per the SWPPP
- Submit a permit fee annually (currently \$100)

A Tier 1 general permit would contain the following additional requirements:

- Perform annual chemical monitoring
- Submit a permit fee annually (currently \$200)

4.9 Wetlands

Section 404 of the Clean Water Act authorizes the Army Corps of Engineers to issue permits for the discharge of dredged or fill material into waters of the United States, including wetlands. In general, for any given site the Corps does not permit the discharge of dredge or fill material to a wetland if there is a practicable alternative to the proposed discharge, which would have less adverse impact.

The locational criteria for new solid waste processing facilities in NR 502.08(3) prohibit construction of the GFT facility within a floodplain (see Table 4-5). This prohibition would mean that most candidate sites would not contain wetlands. Nonetheless, to avoid having to apply for and comply with this type of permit, all potential sites should be carefully reviewed to ensure that they do not have wetlands.